

Appl. No. : 09/252,842  
Filed : February 19, 1999

a chemical library comprising storage locations for at least approximately 1000 multi-well plates, and at least approximately 100,000 addressable chemical storage locations each containing a different chemical;

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a computer controlled chemical well retriever for programmable selection and retrieval of selected ones of said chemical wells;

a transport path coupled to said chemical library; and

a plurality of automated liquid handling devices coupled to said transport path;

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wherein said system is programmable to retrieve and handle either (a) the samples from every one of the chemical wells of an entire multiwell plate or (b) the samples from a subset of chemical wells within said multiwell plate.

#### REMARKS

Applicants have amended Claims 1, 20, and 24, and have cancelled Claim 8 without prejudice. Applicants make no admissions as to the patentability of Claim 8 by its cancellation and reserve the right to pursue the subject matter contained therein in this or any other patent application. The specific changes to the amended claims are shown on a separate set of pages attached hereto and entitled VERSION WITH MARKINGS TO SHOW CHANGES MADE, which follows the signature page of this Amendment. On this set of pages, the insertions are underlined, while the **[deletions are in brackets and bolded]**. The amendments add no new matter and are fully supported by the specification as originally filed.

Applicants respond below to rejections and objections raised by the Examiner in the Office Action of December 7, 2001.

#### I. Rejections under 35 U.S.C. § 112, First Paragraph and Second Paragraph

Claim 23 stands rejected under 35 U.S.C. § 112, first paragraph and second paragraph. Applicants thank the Examiner for bringing to Applicants' attention the discrepancy between the clean version of Claim 23 and the version with markings showing changes. Applicants note that the correct version of Claim 23 is the version with markings showing changes. Thus, Claim 23 reads:

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23. (ONCE AMENDED) The chemical storage apparatus of Claim 22, comprising at least approximately 2000 storage locations for multi-well plates.

Applicants respectfully maintain that in view of this clarification the Examiner's rejections under 5 U.S.C. § 112, first paragraph and second paragraph, are now moot and that the claim is allowable..

## **II. Rejections under 35 U.S.C. § 103**

Claims 20 and 22-24 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over MacIndoe in view of Ishizaki. Claims 8, 10-12 and 21 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over MacIndoe in view of Ishizaki, further in view of Allegro<sup>TM</sup> by Zymark. Claims 1-3, 20, and 22-24 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Ashihara in view of Shuttleworth, Inc., "Flat Panel Display News" February 1996. Claims 8, 10-12, and 21 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Ashihara in view of Shuttleworth, Inc., "Flat Panel Display News" February 1996, further in view of Allegro<sup>TM</sup> by Zymark.

Applicants respectfully traverse. Applicants have amended Claims 1 and 24 to include the element that the "system is programmable to retrieve and handle either (a) the samples from every one of the chemical wells of an entire multiwell plate or (b) the samples from a subset of chemical wells within said multiwell plate." Support for this amendment is found throughout the specification, and specifically at, *inter alia*, Figure 10A (showing an embodiment of a scientist interface in which selection can be made "By Samples" or "By Plates"), and page 43, lines 5-7. None of the cited references teach or suggest a system that can be programmed to retrieve and handle either (a) the samples from every one of the chemical wells of an entire multiwell plate or (b) the samples from a subset of chemical wells within the multiwell plate. The cited references describe devices where all samples loaded into the apparatus are screened.

Furthermore, Applicants have amended Claim 20 to recite that chemicals are retrieved or handled from "less than all" of the addressable chemical wells. None of the prior art of record is directed to, describes the retrieval or handling of, or provides motivation for the retrieval or handling of chemicals from less than all of the wells. All the prior art of record describe methods

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in which the compounds in *all* sample containers are processed in the particular assay. Consequently, the claims are patentable over the cited prior art.

### CONCLUSION

The applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims pursuant to statutory sections 103 and 112, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. In light of these amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested.

Any claim amendments which are not specifically discussed in the above remarks are not made for patentability purposes, and it is respectfully submitted that the claims satisfy the statutory requirements for patentability without the entry of such amendments. These amendments have only been made to increase claim readability, to improve grammar, or to reduce the time and effort required of those in the art to clearly understand the scope of the claim language.

If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly.

Respectfully submitted,

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Dated: May 6, 2002

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VERSION WITH MARKINGS TO SHOW CHANGES MADE.

1. (THRICE AMENDED) A high throughput chemical [screener] screening system comprising:

a chemical library comprising storage locations for at least approximately 3000 multiwell plates, each of which comprises at least approximately 96 individual chemical wells for containing samples;

a computer controlled chemical well retriever for programmable selection and retrieval of a subset of said multiwell plates comprising selected ones of said chemical wells;

[an automated, bi-directional, and parallel] a transport path coupled to said chemical library for receiving [chemicals] said subset of said multiwell plates from and returning [chemicals] said subset of said multiwell plates to said chemical library,

[wherein said transport path couples to at least one plate stacking storage buffer;]  
and

a plurality of [asynchronously operable] automated liquid handling devices operatively coupled to said transport path, whereby said high throughput chemical screening system [screener] is configured to process at least approximately 25,000 chemical samples in a 24 hour period;

wherein said system is programmable to retrieve and handle either (a) the samples from every one of the chemical wells of an entire multiwell plate or (b) the samples from a subset of chemical wells within said multiwell plate.

Please cancel Claim 8, without prejudice to, or disclaimer of, the subject matter contained therein.

20. (ONCE AMENDED) A high throughput chemical screener comprising:

a chemical library comprising storage locations for at least approximately 1000 multiwell plates, each having a plurality of chemicals;

a computer controlled chemical retriever for programmable selection and retrieval of selected ones of said [chemicals] plates;

a [parallel] transport path coupled to said chemical library; and

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a plurality of [asynchronously operable] automated liquid handling devices coupled to said transport path, wherein said devices handle chemicals from less than all of the wells of said retrieved plates.

24. (ONCE AMENDED) A high throughput chemical [screener] screening system comprising:

a chemical library comprising storage locations for at least approximately 1000 multi-well plates, and at least approximately 100,000 addressable chemical storage locations each containing a different chemical;

a computer controlled chemical well retriever for programmable selection and retrieval of selected ones of said chemical wells;

a [parallel] transport path coupled to said chemical library; and

a plurality of [asynchronously operable] automated liquid handling devices coupled to said transport path;

wherein said system is programmable to retrieve and handle either (a) the samples from every one of the chemical wells of an entire multiwell plate or (b) the samples from a subset of chemical wells within said multiwell plate.